3:00

THE DUKE MULTICENTER CORONARY TRANSLUMINAL EXTRACTION-ENDARTERECTOMY REGISTRY: ACUTE AND CHRONIC RESULTS

Michael H. Sketch, Jr., William W. O'Neill, Joseph P. Galichia, Robert C. Feldman, Craig M. Walker, Steven R. Sawchak, James E. Tcheng, Thomas C. Wall, Harry R. Phillips, and Richard S. Stack, Duke University Medical Center, Durham, NC

Coronary Transluminal Extraction-endarterectomy (TEC) was performed on 223 lesions (76 TEC alone; 147 TEC + PTCA) in 201 pts at 5 centers. Lesion distribution included: protected left main (8), LAD (53), circumflex (23), RCA (55) and vein bypass grafts (84). Primary success (≤ 50% residual diameter stenosis by digital analysis) was achieved in 94% (130/139) native coronary and 98% (82/84) vein graft lesions. The mean digital diameter stenosis of 76 ± 12% was reduced to 35 ± 17%. Complications included: abrupt coronary reocclusion (2 pts), major dissection (3 pts), distal embolization (3 pts), thrombosis (1 pt) and perforation (4 pts). These resulted in emergency coronary bypass surgery in 7 pts (3.5%) and Q-wave myocardial infarction in 1 pt (0.5%). There were no procedural deaths. The in-hospital mortality was 0.5% (1/176) and 12% (3/25) for non-infarct and acute infarct patients, respectively.

Six-month angiographic follow-up (by digital analysis) was obtained in 95 of the 102 eligible pts (93%). The overall restenosis rate was 44% (42/95). In comparison, a restenosis rate of 43% was obtained in 2,191 consecutive PTCA pts with an 84% 6-month angiographic follow-up rate.

In conclusion, this multicenter experience suggests transluminal extraction-endarterectomy is a safe and effective coronary interventional procedure with acute success and restenosis rates similar to PTCA. Further studies are currently being designed to directly compare TEC to PTCA in specific patient subgroups (e.g. bypass grafts, acute myocardial infarction, diffuse disease) that tend to do poorly with standard balloon angioplasty alone.

3:15

MULTI-CENTER REGISTRY OF PERCUTANEOUS CORONARY ROTATIONAL ABLATION USING THE ROTABLATOR.

Maurice Buchbinder, David Warth, Wm. O'Neill, Nadim Zacca, Robert Ginsburg, Michel Bertrand, Raimund Erbel, an Fourrier, Martin Leon, University of California Medical Center, San Diego, CA, USA

From January 1988 to May 1990, 315 patients with 366 lesions were entered in a multi-center study of Percutaneous Coronary Rotational Ablation (PTCRA) using the Rotablator (R) (Heart Technology, Inc.). R is a high speed (160-190,000 rpm) rotational catheter with a diamond microcrystal tip which ablates inelastic atherosclerotic plaque while sparing normal elastic tissue. There were 249 males and 66 females with an average age of 61 (33-87). Lesions were located in the LAD/DIAG 45%, RCA/PDA 36%, CX/OM 16% and LM 3%. Of all lesions, 87% were complex (type B or C). Acute success defined as <50% residual stenosis was achieved in 95% of patients. Adjunctive PTCA was performed in 32% of lesions primarily to achieve maximal luminal diameter in larger arteries. Clinically significant complications include non-Q MI in 4.8% urgent CABG in 1.6% and Q-wave MI in 0.9%. There were no deaths. Long term (> 6 months) angiographic follow-up was performed in 94% of eligible patients (152/162) showing a restenosis rate (defined as < 50% residual stenosis at the treatment site) of 32%.

Conclusion: PTCRA is a safe and effective treatment modality with excellent initial results and good long term patency.

Monday, March 4, 1991
2:00PM–3:30PM, Room 264, West Concourse
Ventricular Tachycardia and Programmed Stimulation

2:00

LONG TERM FOLLOW-UP OF PATIENTS WITH INDUCIBLE SUSTAINED MONOMORPHIC VENTRICULAR TACHYCARDIA AND HEART DISEASE

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Antiarrhythmic therapy deemed effective by electrophysiologic testing (EPT) has been reported to produce better 1-2 year survival in patients with inducible sustained monomorphic ventricular tachycardia (VT); longer follow-up has not been reported. We therefore followed all patients with heart disease and VT studied at our institution before 1985. Charts were reviewed and patients or physicians were contacted. Results: Of 136 patients with VT, follow-up data were obtained on 114 (84%). An effective response to therapy at EPT was defined in 69%. Kaplan-Meier analysis for over 84 mo (mean 51±37 (SD) mo) showed patients treated with effective therapy (ET) had an improved survival (58%) over those on ineffective therapy (IT) (28%) ($p<.002$). The maximal separation in survival curves occurred at 2 years, but continuing benefit occurred afterwards. Ejection fractions in the two groups were 34±14% vs 32±13%. However, within either group survival was better with a higher ejection fraction. Sudden death free survival was also greater ($p<.001$) and continued to diverge from the IT group for over 7 years when ET was continued. Review of the 13 patients who had an effective response at EPT and who then died suddenly showed 3 had subtherapeutic drug levels and 2 stopped therapy prior to death. Conclusion: An effective response to therapy determined by EPT predicted improved sudden and all cause of death free survival for over 7 years if effective therapy was continued. Patients with an effective response at EPT may still be at risk for sudden death if drug levels become subtherapeutic.

2:15

SERIAL ELECTROPHYSIOLOGIC STUDIES DO NOT PREDICT SUCCESS IN PATIENTS WITH RAPID VENTRICULAR TACHYCARDIA

Lee A. Biblo, Raul Mitrani, Mark D. Carlson, Kostas A. Gatzoylis, Zubair Jafar, Albert L. Waldo, Case Western Reserve University/University Hospitals of Cleveland, Cleveland, Ohio

We hypothesized that electrophysiologic study (EPS) guided suppression of ventricular tachycardia (VT) of cycle length ≤ 250 ms does not predict subsequent efficacy. We analyzed 84 consecutive patients who had sustained monomorphic VT induced at baseline EPS. Patients had an average of 1.6 follow up EPS drug trials. Thirty-one patients (Group I) had a VT cycle length ≤ to 250 ms. Fifty-three patients (Group II) had a VT cycle length > 250 ms. Mean age - 63 years, mean ejection fraction - 31%, and frequency of coronary artery disease - 90% were similar in Groups I and II. Patients were followed an average of 17 months after EPS. Subsequent arrhythmic events were defined as sudden cardiac death, documented sustained VT, syncope, or symptomatic automatic implantable cardioverter defibrillator discharge. In Group I, subsequent arrhythmic events occurred in 6 of 13 patients with successful EPS guided drug therapy compared with 6 of 18 patients without successful EPS guided drug therapy (p = NS). In Group II, subsequent arrhythmic events occurred in 1 of 13 patients with successful EPS guided therapy compared with 19 of 41 patients without successful EPS guided drug therapy (p = .03). CONCLUSIONS: Successful EPS guided drug therapy predicted a favorable long-term outcome in those patients with a VT cycle length > than 250 ms. In those patients with a VT cycle length ≤ 250 ms, successful EPS guided drug therapy did not predict an arrhythmia-free long-term outcome.